Patent Claims

1. Automotive transmission, with a closeable and separable clutch, which is in the form of a disk clutch, wherein the disk carrier exhibits, distributed about the circumference of a cylindrical segment, disk-facing alternating axial grooves and axial projections, and on one axial end is connected with a hub via a drive plate, and wherein for transmission of torque a connection fixed against rotation is established between the drive plate and the disk carrier via a plug-in gearing, in which teeth arranged radially at the outer circumference of the drive plate engage in corresponding radial recesses in the disk carrier, thereby characterized, that the drive plate (3, 3') is connected with the disk carrier (2) axially free of play, in that the recesses of the disk carrier (2) are in the form of open-ended cutouts (13), through which the first teeth (load teeth) (20, 20') of the drive plate (32, 3') pass radially and lie against with their axial inner sides (24), and in that axially outside the disk carrier (2) exhibits a form-fittingly supported securing ring (4), against which the second teeth (bearing teeth)(21) of the drive plate (3, 3') lie with their axial outer sides (25).

2. Automotive transmission according to Claim 1, thereby characterized, that for bordering or limiting the radial dimensions of the disk clutch (1) the cutouts (13) are located respectively centrally in the disk facing axial projections (10') of the disk carrier (2).

3. Automotive transmission according to Claim 1 or 2, thereby characterized, that for limiting the loading of the drive plate (3, 3') the bearing teeth (21) are comprised respectively of two bearing tongues (22), which are provided for being located adjacent side flanks (23) of respectively one disk-facing axial projection (10").

4. Automotive transmission according to Claim 3, thereby characterized, that for limiting the load on the drive plate (3, 3') and the disk carrier (2) the drive plate (3, 3') exhibits between the bearing tongues (22) of the bearing teeth (21) respectively no load teeth (20, 20'), and the disk carrier (2) exhibits no cutouts (13) at the axial projections (10") immediately adjacent the bearing tongues (22) of the bearing teeth (21).

5. Automotive transmission according to Claim 4, thereby characterized, that for even distribution of load and bearing forces the load teeth (20, 20') and the bearing teeth (21) are distributed alternating evenly about the outer circumference of the drive plate (3, 3').

6. Automotive transmission according to Claim 5, thereby characterized, that the drive plate (3, 3') exhibits at its outer circumference, in place of each third load tooth (20, 20'), respectively one bearing tooth (21).

7. Automotive transmission according to one of Claims 3 through 6, thereby characterized, that the axial projections (10") of the disk carrier (2) provided for the two-sided alignment of the bearing teeth (22) are elongated axially and exhibit on their ends and in the elongated area (16) respectively one segment of a annular groove (17) for receiving the securing ring (4).

8. Automotive transmission according to one of Claims 1 through 7, thereby characterized, that for avoidance of tooth flank play due to thermal expansion the load teeth (20') of the drive plate (3') exhibit radially outwardly respectively on both sides circumferential widenings (30) with inner wedge surfaces (31), which are provided for lying against the peripheral or circumferential inner

walls (15) of the cutouts (13) upon a dilatoin or expansion of the disk carrier (2).

9. Automotive transmission according to one of Claims 1 through 8, thereby characterized, that for axial positioning of the drive plate (3, 3') on the hub (5), the hub (5) exhibits a shoulder (32) with an outer cylinder surface (33) and the drive plate (3, 3') exhibits a central bore (34) with a corresponding inner cylinder surface (35), and that the hub (5) and the drive plate (3, 3') in an adjusted axial position are welded to each other in the contact area (37) of the shoulder (32) and the central bore (34).

10. Automotive transmission according to one of Claims 1 through 9, thereby characterized, that the transmission is an automated manual transmission with a motor clutch, and that the disk clutch (1) is used as a motor clutch.

11. Automotive transmission according to one of Claims 1 through 9, thereby characterized, that the transmission is automated double clutch transmission with two motor clutches and that the disk clutch (1) is used as a motor clutch.

12. Automotive transmission according to one of Claims 1 through 9, thereby characterized, that the transmission is a torque converter with multiple shift elements (shift clutches and shift brakes), and that the disk clutch (1) is used as a torque converter.